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| 10/087,256 | 03/01/2002 | Kishan Khemani | 11527.354 | 4244 |

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| EXAMINER |
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WOODWARD, ANA LUCRECIA

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| ART UNIT | PAPER NUMBER |
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1711

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/087,256

Applicant(s)

KHEMANI, KISHAN

Examiner

Ana L. Woodward

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on October 20, 2005
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 5-28 is/are pending in the application.
- 4a) Of the above claim(s) 13, 20, 24, 27 and 28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1, 5-12, 14-19, 25 and 26 is/are allowed.
- 6) ☒ Claim(s) 1, 5-12, 14-19, 25 and 26 is/are rejected.
- 7) ☐ Claim(s) is/are objected to.
- 8) ☐ Claim(s) are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. .
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. <u> </u> |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u> </u> | 6) <input type="checkbox"/> Other: <u> </u> |

DETAILED ACTION

Election/Restrictions

1. Claims 13, 20-24, 27 and 28 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on June 24, 2004.

Claim Rejections - 35 USC § 112

2. Claim 5 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claimed language “*at least* about 55%” lacks express antecedent basis and, as such constitutes new matter.

3. Claims 1, 5, 7-12, 25 and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the metes and bounds of “substantially free” are indeterminate in scope.

In claims 5 and 7, line 2, it is unclear as to whether or not “the stiff biodegradable polymer” would include any *stiff* natural starch component optionally present.

In claims 5 and 7, lines 3-4, it is unclear as to whether or not the “combined weight of the soft and stiff thermoplastic polymers” includes the optional natural starch component of claim 1.

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In claims 8-12, it is unclear as to whether the recited glass transition temperatures pertain only to the corresponding "synthetic" biodegradable polymers and not to any optional stiff or soft natural starch component.

In claim 25, it is unclear as to whether or not the optional thermoplastic starch is required to be stiff.

Claim Rejections - 35 USC § 102/103

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States:

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 6, 8-12 and 25 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. 6,096,809 (Lorcks et al).

Lorcks et al disclose films derived from biologically degradable compositions comprising

1) thermoplastic starch,

2) at least one polymer selected from the group consisting of aromatic polyesters,

polyester copolymers having both aliphatic and aromatic blocks, polyesteramides, polyethylene oxide polymers, polyglycols and polyester urethanes and

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3) at least one aliphatic polyester or copolyester. The thermoplastic starch is included in an amount in a range from about 10% to about 95% by weight of the composition.

In Example 6, Lorcks et al's composition comprises 54.5 % thermoplastic starch (reading on the starch polymer of the present claims), 10.9% polylactic acid (reading on the presently claimed stiff polymer), and 30% aliphatic-aromatic copolyester (reading on the presently claimed soft polymer). In Example 23, Lorcks et al's composition comprises 74.4 % thermoplastic starch (reading on the starch polymer of the present claims), 23.5% BAK 1095 polyamide (reading on the presently claimed stiff polymer), and 24.5% aliphatic-aromatic copolyester (reading on the presently claimed soft polymer).

Given the inexactitude of the presently claimed "substantially free", it is maintained that "a thermoplastic starch that is substantially free of high boiling liquid plasticizers (or glycerin per claim 25)", when given its broadest reasonable interpretation, reads on the thermoplastic starch component used by patentees. In the alternative, even if said language does not read on the exemplified starch components of Lorcks et al, the present claims by virtue of the "comprising" terminology do not preclude starch components that are not substantially free of plasticizers.

Claim 6 has been incorporated into this rejection in the event that patentees' starch components do not meet the "substantially free" of plasticizers limitations. In this interpretation, the exemplified compositions, by not containing any ^{said} of type of starch component, would satisfy the amount "of less than 10% by weight" which includes zero as a lower limit.

Claim Rejections - 35 USC § 103

7. Claims 5, 7, 14-19 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 6,096,809 (Lorcks et al) further in view of U.S. 5,817,721 (Warzelhan et al).

The disclosure of Lorcks et al differs in essence from the claims 5 and 7 in not expressly exemplifying a high content of stiff polymer. Lorcks et al teach that the amounts of the various polymers can be varied depending on the intended use of the polymer mixture with the amount of starch being as low as “about” 10% (column 3, lines 58-66, column 4, lines 7-12, etc.). In fact, high amounts of stiff polymer are employed in example 11. Accordingly, it is maintained that it would have been obvious to one having ordinary skill in the art to have employed high amounts of the stiff polymer for its expected additive effect in accordance with the intended use of the polymer mixtures. The disclosure by the reference of an exemplified embodiment does not teach away from the entire disclosure of the patent, all of which must be considered in the analysis of obviousness.

As to the requirement for fillers, it is maintained that the generic “fillers” prescribed by Lorcks et al should be interpreted broadly to include any conventional filler, organic or inorganic having any of a variety of different forms or shapes inclusive of particulate form. The express disclosure by the reference of a preferred filler, i.e., cellulose fibers, does not teach away from the entire disclosure of the patent, all of which must be considered in the analysis of obviousness. The addition of from 0-80% by weight of fillers, particulate or fibrous organic and inorganic, to analogous biodegradable polymer compositions, is well known in the art as evidenced by Warzelhan et al.

8. Claims 1, 5-12, 14-19, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 5,883,199 (McCarthy et al) in view of U.S. 5,817,721 (Warzelhan et al).

McCarthy et al disclose biodegradable blends comprising a polylactic acid-based polymer or copolymer, reading on the presently claimed stiff polymer, and a polyester polymer or

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copolymer, embracing aliphatic-aromatic copolyesters reading on the presently claimed soft polymer (abstract, column 2, lines 42-45, column 6, lines 5-12). The polymers are present in a ratio of 9:1 to 1:9 by weight.

In essence, the disclosure of McCarthy et al differs from the present claims in not expressly exemplifying the use of an aliphatic-aromatic copolyester. It is maintained that it would have been obvious to one having ordinary skill in the art to have used an aliphatic-aromatic copolyester as the polyester polymer because patentees clearly teach that it can be used. Accordingly, absent evidence of unusual or unexpected results, no patentability can be seen in the presently claimed subject matter.

As to the requirement for fillers, it is maintained that it would have been obvious to one having ordinary skill in the art to have added any conventional filler, organic or inorganic, to the biodegradable compositions of McCarthy et al for their expected additive effect. The addition of from 0-80% by weight of fillers, particulate or fibrous organic and inorganic, to analogous biodegradable polymer compositions, is well known in the art as evidenced by Warzelhan et al.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned

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with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 1, 5-12, 14-19, 25 and 26 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims of copending Application No. 11/103,999. Although the conflicting claims are not identical, they are not patentably distinct from each other because they contain overlapping subject matter.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Amendments

11. Applicant's amendments filed October 20, 2005 requiring a soft aliphatic-aromatic copolyester has obviated the rejection based on Zhang et al.

Response to Arguments

12. Applicant's arguments filed October 20, 2005 with respect to Lorcks et al have been fully considered but they are not persuasive.

The claimed language "a thermoplastic starch that is substantially free of high boiling liquid plasticizers (or glycerin per claim 25)" does not serve to distinguish over Lorcks et al. Said language, when given its broadest reasonable interpretation, reads on the thermoplastic starch components used by patentees. The terminology "substantially free", given its inexactitude, is deemed to include the amounts of plasticizers used by Lorcks et al. Thus, patentees' exemplified starch components read on the presently claimed "thermoplastic starch that is substantially free of high boiling liquid plasticizers (or glycerin per claim 25)".

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In any event, even if said language does not read on the exemplified starch components of Lorcks et al, the present claims by virtue of the “comprising” terminology do not preclude other types of starch components, e.g., starches that are not substantially free of plasticizers.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

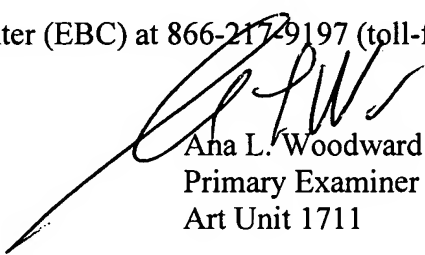
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana L. Woodward whose telephone number is (571) 272-1082. The examiner can normally be reached on Monday-Friday (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ana L. Woodward
Primary Examiner
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